Engineered

FLUORESCENT LIGHTING

THE ART METAL COMPANY
CLEVELAND, OHIO

CATALOG NO. 741
WITH ILLUMINATION DESIGN DATA
A. I. A. FILE 31F2

FLUORESCENT LIGHTING EQUIPMENT

ENGINEERING SERVICE

• FLUORESCENT lighting installations can be planned on the same basic concepts as INCANDESCENT lighting, however, FLUORESCENT Lighting is a highly specialized form of illumination and requires competent engineered planning to insure a lighting installation of the utmost efficiency.

We suggest problems on special applications or major general lighting installations be submitted our Illuminating Engineering Department for layout.

RATED LUMEN TABLES

FLUORESCENT LAMPS

Lamp	Watts	Daylight	3500° White
18" T8	15	495	615
24" T12	20	730	900
36" T8	30	1200	1450
48" T12	40	1700	2100
36" T17	65	1800	2100
60" T17	100	3350	4200

In any computation involving wattage or over-all efficiency of Fluorescent Lighting the ballast wattage must not be neglected. This is a variable ranging from 15%-30% of the wattage of the lamps themselves.

INCANDESCENT (FILAMENT) I.F. LAMPS

Wattage	Lumens
40	465
60	835
100	1650
150	2600
200	3700
300	5700
500	10,000
1000	21,500

OPERATING EQUIPMENT

All Fluorescent units shown in this catalog are complete with latest type starters and lamp ballasts for operation on 110-125V—60 cycle A.C.

Fluorescent fixtures of 2-4 or 8 lamps are equipped with High Power Factor Tu-Lamp ballasts which make use of the split phase principle—one lamp being ballasted by inductance and the other lamp by inductance and capacitance in series, minimizing cyclic flicker or stroboscopic effect.

Single Lamp Fluorescent fixtures are listed with high power factor ballasts and also with uncorrected ballasts. Equipment originally installed with low power factor ballasts can always have corrective capacitors added later if required.

POWER-FACTOR

The importance of power factor arises from the fact that uncorrected Fluorescent ballast equipment commonly called low power factor (55%-60% power factor) places a handicap on the wiring and control devices on the customer's premises. The Utility Companies are, in many instances, requiring high power factor (90%-100%) because low power factor devices require generating and power distribution equipment capacity out of all proportion to the energy registered.

All Art Metal high power-factor Fluorescent fixtures conform to the requirements of all Utility regulations having to do with this subject.

WARRANTY

All units are tested before leaving factory—The Art Metal Company assumes no responsibility for the performance or life of any component equipment not of our manufacture.

The manufacturers of starter switches and ballasts will replace defective equipment but will accept no labor or transportation charges.

ORDERS

ALL ORDERS MUST SPECIFY voltage and cycles, A.C. (standard). Equipment for D.C. or 50 Cycle A.C. is special—prices on application.

NOTE—SEE PAGES 14 AND 15 FOR 50-FOOT CANDLE TABLE, SPACING GUIDE FOR CONTINUOUS ILLUMINATION SYSTEMS AND CO-EFFICIENTS OF UTILIZATION.

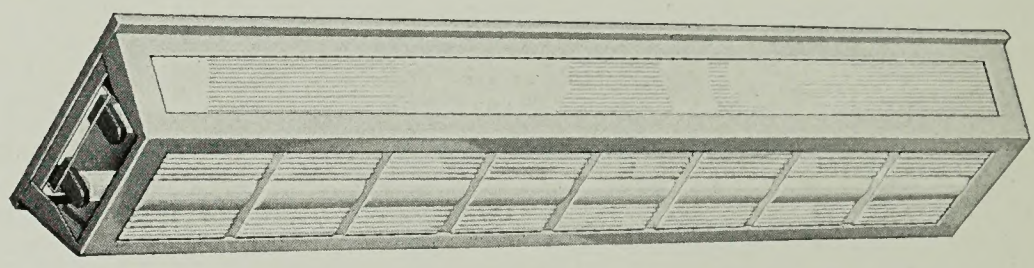
CONTINUOUS PANELITE FLUORESCENT
SYSTEM OF ILLUMINATION

• The PANELITE System of Illumination is specifically engineered and designed for effective and efficient Fluorescent Lighting in continuous form. The functional design incorporates the use of Fresnel directional control lenses or Lustrex diffusing glass. This continuous method of illumination, mounted directly to the ceiling, provides ample lumens for accepted high levels of illumination by utilizing adequate numbers of lamps to properly and uniformly illuminate interiors. The PANELITE System is a luminous architectural element and becomes an integral part of the interior with esthetic fitness. The PANELITE System of Illumination is composed of three elements: STANDARD SECTION (Illustrated below); BASE UNIT (Illustrated page 5); and INCANDESCENT Lens BOOSTER UNIT (Illustrated page 6).

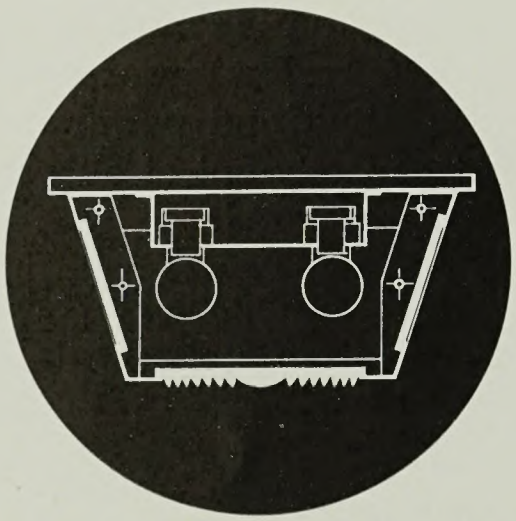
STANDARD PANELITE SECTION

Cat. No.	Lamps	Size	Glass
2512L	2—48"—80W	11¾"x50"x5⅝"	Lustrex
2512F	2—48"—80W	11¾"x50"x5⅝"	Fresnel

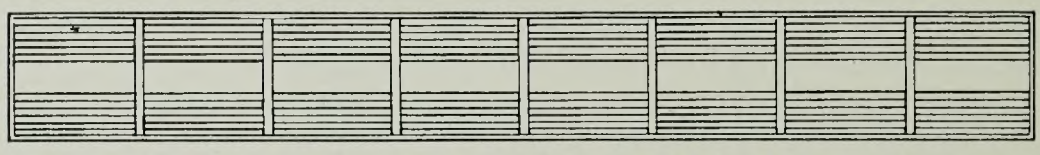
Finish: Satin Aluminum.
Reflecting Surfaces: Glossy White Enamel.
Includes cast junction strap.



STANDARD PANELITE SECTION

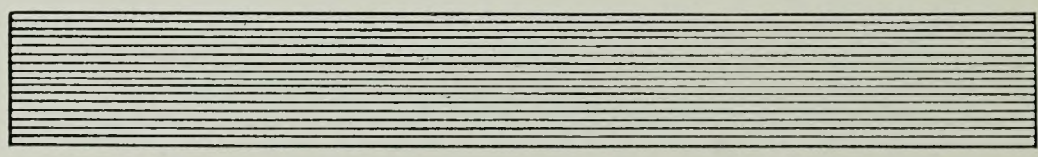


Detail of Standard PANELITE Section—all inner reflecting surfaces are enamelled glossy white — 88% reflection factor.



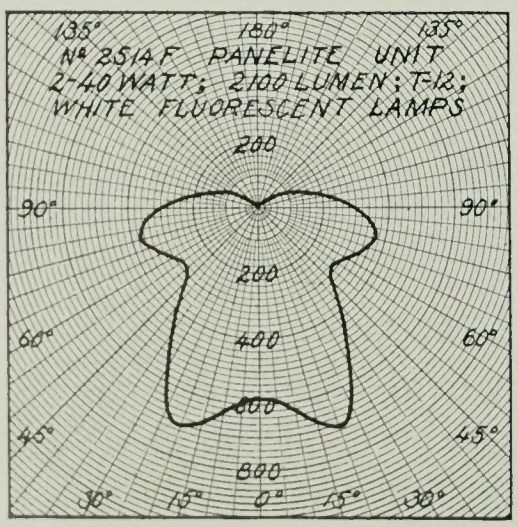
FRESNEL LENS BOTTOM PANELS
(Designated by letter "F"—following unit number)

CONTROLS the light flux to produce a maximum spread of illumination with positive control of brightness. These Panels ccme in 2—24" lengths, butted in the center.



LUSTREX BOTTOM PANELS
(Designated by letter "L" following unit number)

HIGH IN TRANSMISSION AND DIFFUSION QUALITIES. This bottom panel comes in 1—48" length.

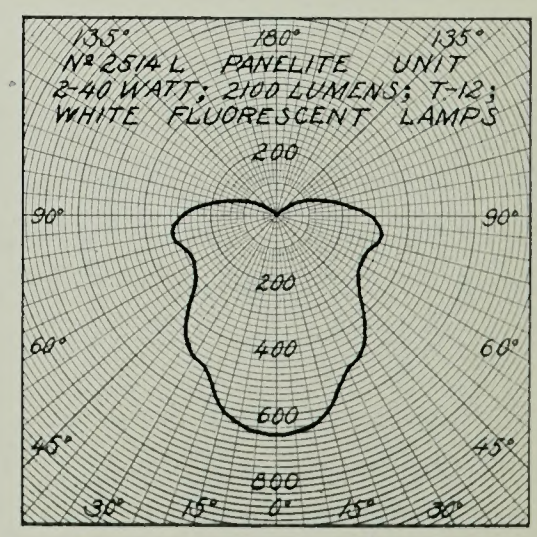


Photometric Candlepower Distribution Curve of No. 2514F PANELITE with FRESNEL LENS PANEL taken in the plane normal to axes of fluorescent lamps.

STELLEX SIDE PANELS

All PANELITE Units are furnished standard with specially processed redirecting Prismatic STELLEX side panels in 48" lengths.

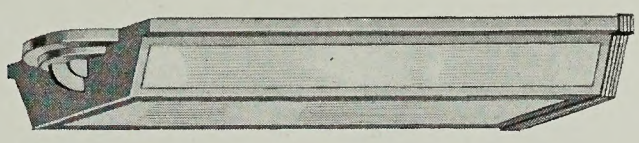
NOTE: SEE PAGES 14-15 FOR 50 FOOT-CANDLE TABLE, SPACING GUIDE FOR CONTINUOUS ILLUMINATION SYSTEMS AND COEFFICIENTS OF UTILIZATION.



Photometric Candelpower Distribution curve of No. 2514L PANELITE with LUSTREX GLASS, taken in the plane normal to axes of fluorescent lamps.

CONTINUOUS PANELITE FLUORESCENT

SYSTEM OF ILLUMINATION



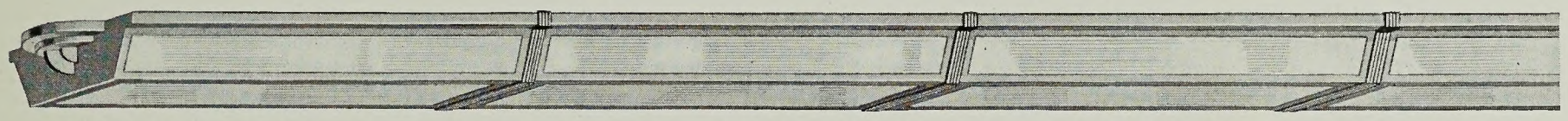
BASE PANELITE UNIT

Cat. No.	Lamps	Size	Depth	Glass
2514L	2—48"— 80W	11¾"x 4' 10"	5⅝"	Lustrex
2514F	2—48"— 80W	11¾"x 4' 10"	5⅝"	Fresnel

Finish: Satin Aluminum.
Reflecting Surfaces: Glossy White Enamel.
Includes two cast ornamental ends.

The PANELITE System of Illumination offers:

1. A luminous architectural element conforming to structural design.
2. Low installation cost utilizes existing outlets.
3. Shadowless illuminated ceilings.
4. Cool illumination.
5. Maintenance at a minimum—panels lift out.



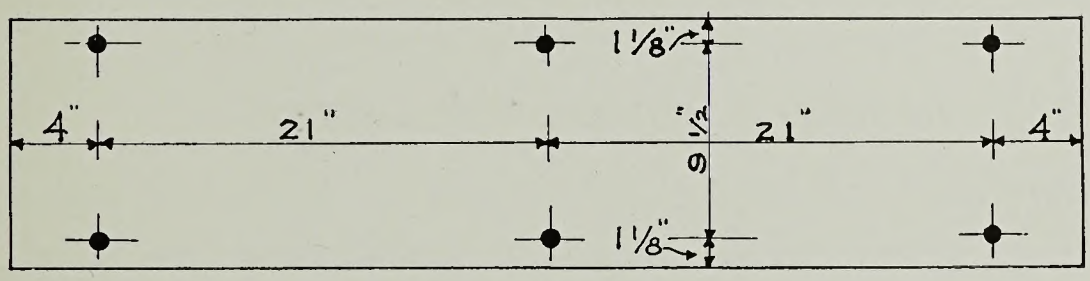
ASSEMBLY OF ARTICULATED PANELITE CONTINUOUS FLUORESCENT SYSTEM

• To assemble and order the PANELITE System, start with the BASE unit (No. 2514)—which has removable ornamental cast ends, one of which can be removed and used at the other end of the run—and add to this the desired number of STANDARD PANELITE sections (No. 2512) to complete the continuous PANELITE system of illumination to the desired length.

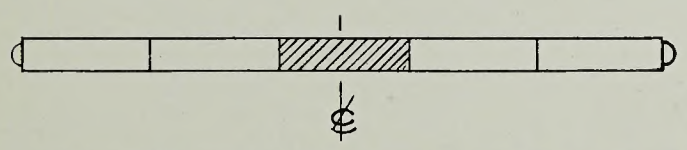
When ordering advise the number of elements in each continuous run.

The wire raceway is secured to the ceiling plate and hand-holes are provided to make final connections after units are aligned and secured to the ceiling. A bushed hole is provided through the ceiling plate to permit entry into each PANELITE element. All Standard sections, Base units, and AMCO Lens Booster Units are coupled together by means of bolts and wing nuts through the cast junction strap illustrated. The side panels then are put in place, lamps inserted and bottom panels slipped into position.

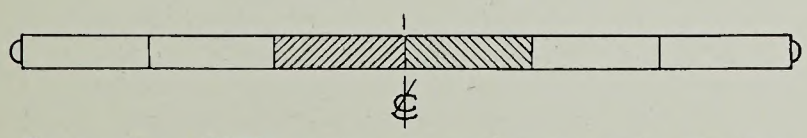
INSTALLATION



PANELITE is accompanied by a paper template of the ceiling pan showing locations of ¼" support holes, for exact positioning of expansion or toggle bolts on the ceiling. This template should be used on CENTER unit or units. Succeeding units are then added to each end equally for correct positioning on the ceiling for each continuous run. A ¾" knock-out for feed wires is provided at each end of the ceiling plate.

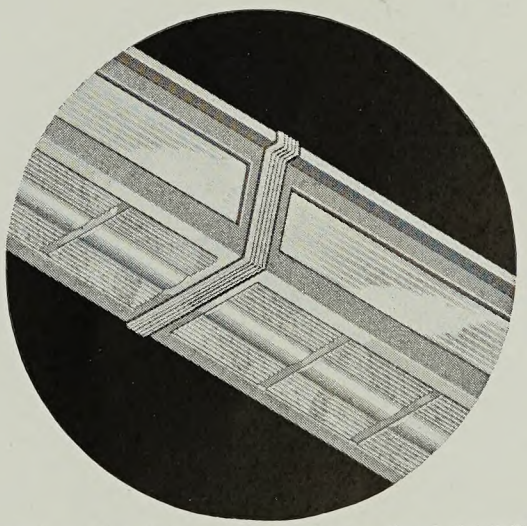


To install an ODD number of units continuously, the template should be used on the center line of the center unit first, adding further sections to each end as illustrated.



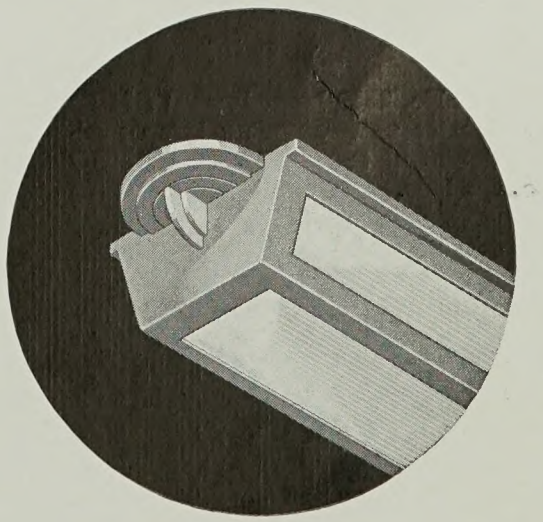
To install an EVEN number of units continuously, the template should be used at the intersection of the two center units first, adding further sections to each end as illustrated.

NOTE: SEE PAGES 14-15 FOR 50 FOOT-CANDLE TABLE, SPACING GUIDE FOR CONTINUOUS ILLUMINATION SYSTEMS AND COEFFICIENTS OF UTILIZATION.



Illustrating the intersection of standard PANELITE sections where Polished Chrome Cast Junction straps are provided to seal and align the joint. One strap is included with each section, and is secured by means of bolts and wingnuts as described in the method of coupling.

CAST END ORNAMENTS. At the terminus of each PANELITE continuous run, cast ornamental ends complete the articulated assembly. These cast Ornamental Ends are included with the BASE PANELITE unit from which one end is removed and used at the end of the run as described previously above.

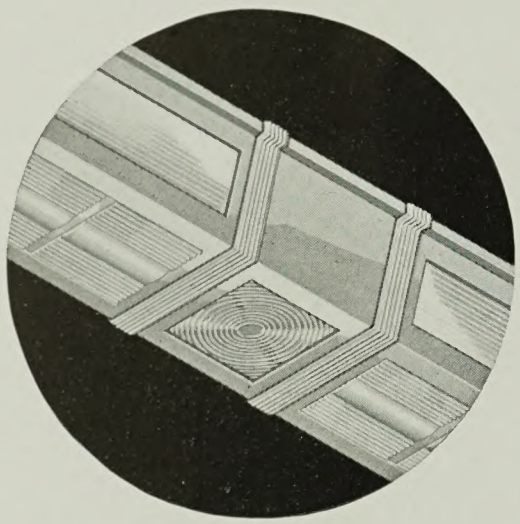


CONTINUOUS PANELITE FLUORESCENT

SYSTEM OF ILLUMINATION

Augmented by Incandescent Amco Lens Booster Units

•The introduction of Incandescent (filament) lamps in the Art Metal optical system of Direct Illumination in combination with Fluorescent, supplements the PANELITE System of Illumination. This blending of two entirely different kinds of light utilizes the predominant qualities of each, the fluorescent producing diffuse illumination with a vertical as well as a horizontal component and the Incandescent in the AMCO Lens Booster Unit, a precisely directed beam of light with high utilization. The Fluorescent Illumination is diffuse, cool and soft to which is added the punch, sparkle, warmth and power of Incandescent to produce a scintillating, lively effect with third dimensional depth. The controlled beams of light from the AMCO Lens Booster Units engineered in design to produce a complete secondary system of illumination is superimposed on the level of illumination produced by the Fluorescent Continuous PANELITE System. This superimposing of Incandescent illumination on the Fluorescent illumination results in a unique lighting innovation.



Above illustrates position of AMCO Lens Booster unit in relation to standard PANELITE Fluorescent units.

THE AMCO COLORISER LENS of The Art Metal Optical System of Direct Illumination is an optically correct Plano-Convex lens designed on the Fresnel principle. The lamp, lens and scientifically contoured specular alzak aluminum reflector, form a completely coordinated lighting unit.

SPECIFICATIONS

Cat. No.	Incandescent Lamps	Amco Lens	Ceiling Diam.
2516	1—100W	1—6" sq.	8x11¾" wide

Finish: Satin Aluminum.
Lens: AMCO Coloriser.
Includes cast junction strap.

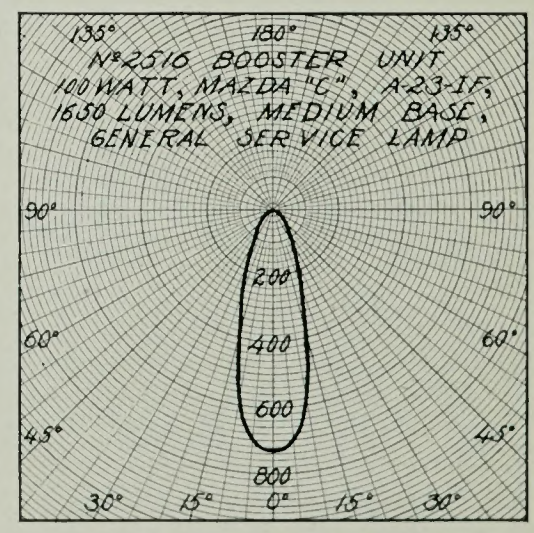
Section of No. 2516 Incandescent AMCO Lens Booster unit—showing lamp position in relation to reflector and AMCO Coloriser lens.

FEATURES OF COMBINATION LIGHTING

1. A luminous architectural element conforming to structural design with a means of plus or accent lighting an integral part of the system.

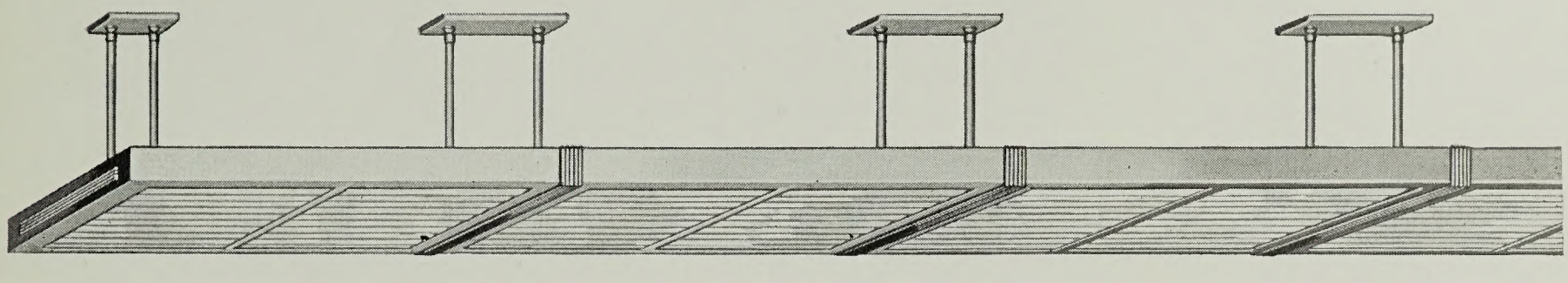
2. Utilization in continuous runs of the Fresnel optical lens principle with both Fluorescent and Incandescent lamps.

3. The steps or risers of the patented AMCO Coloriser Lens in the Booster unit are treated with color to harmonize with the color quality of the fluorescent panel.



Photometric candlepower distribution curve of No. 2516 AMCO Lens Booster unit with characteristic distribution.

EQUALUX CONTINUOUS SYSTEM OF ILLUMINATION



ARTICULATED EQUALUX SUSPENDED CONTINUOUS SYSTEM

● A continuous Fluorescent lighting system, suspended to any desired length from the ceiling. This continuous system utilizes the same principles of illumination as Equalux Units illustrated and described on the opposite page. Made only for two and four parallel lamps.

NOTE: SEE PAGES 14-15 FOR 50 FOOT-CANDLE TABLE, SPACING GUIDE FOR CONTINUOUS ILLUMINATION SYSTEMS AND COEFFICIENTS OF UTILIZATION.

END SECTIONS

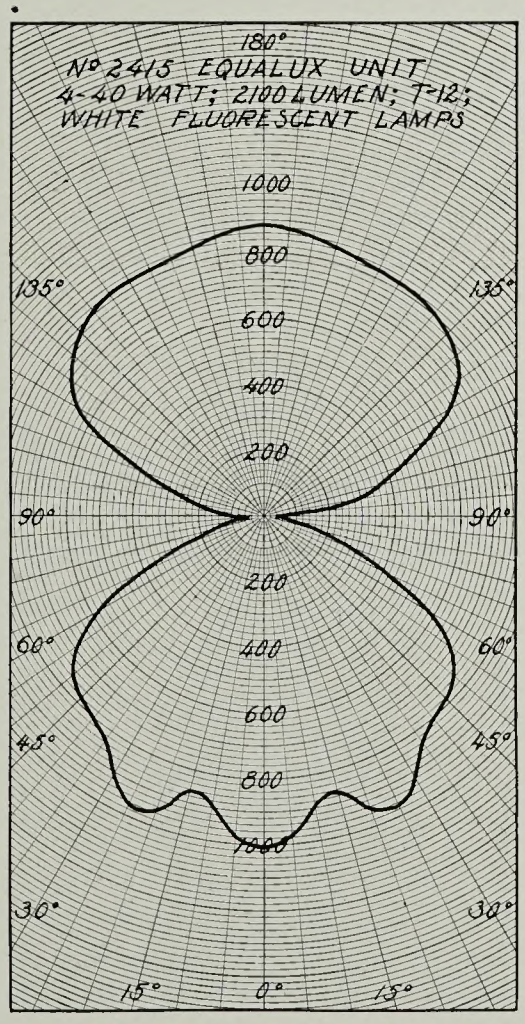
Cat. No.	Lamps	Body Size	Length O.A.
2530	2—48"— 80W	8½"x50½"x3"	36"
2531	4—48"—160W	17" x50½"x3"	36"
2532	2—60"—200W	10½"x63½"x5"	36"
2533	4—60"—400W	21" x63½"x5"	36"

INSIDE SECTIONS

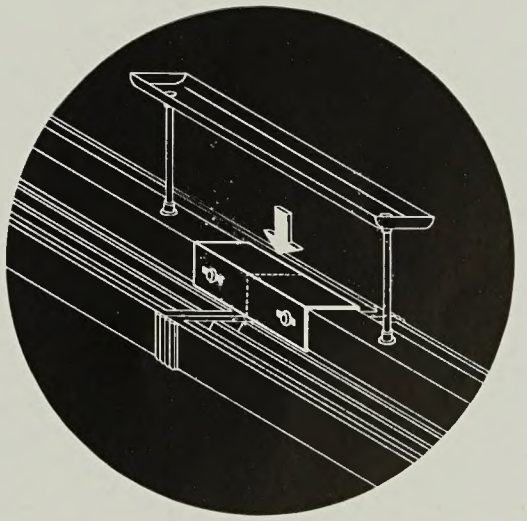
2534	2—48"— 80W	8½"x50½"x3"	36"
2535	4—48"—160W	17" x50½"x3"	36"
2536	2—60"—200W	10½"x63½"x5"	36"
2537	4—60"—400W	21" x63½"x5"	36"

Finish: Satin Aluminum—Polished Chrome Trim.

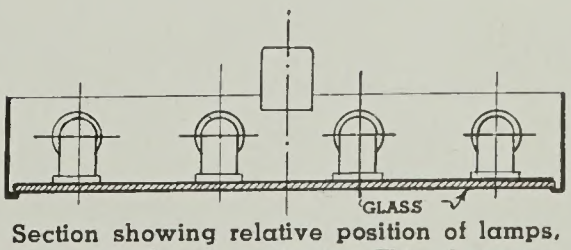
Glass: Clear Crystal Fluted—Simulates Louvering.



Photometric candlepower distribution curve of No. 2415 in plane normal to axes of lamps. This characterizes all Equalux Units and all sections of the Equalux Continuous System.

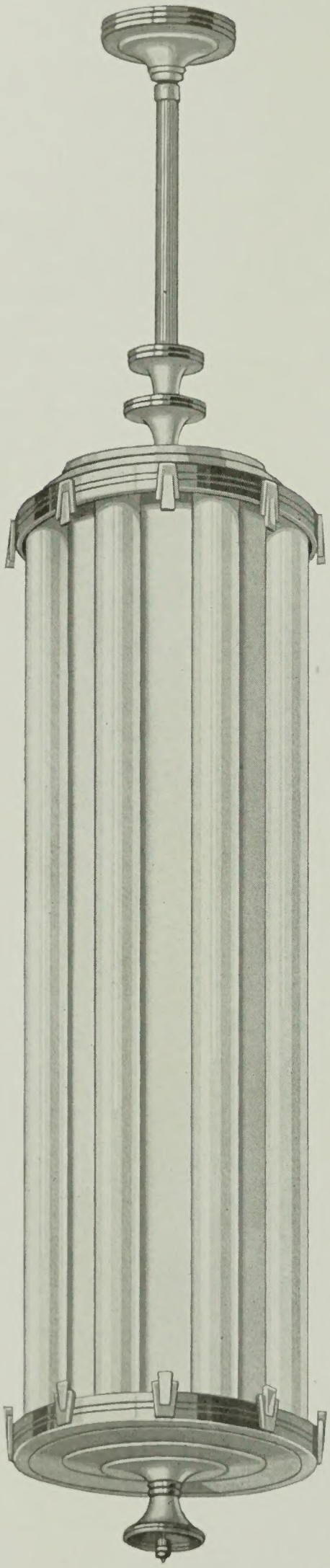


Detail looking down on junction of Equalux Continuous System—hangers and wire-way are aligned first then locked in an inverted U channel strap, indicated by arrow, simplifying wiring and installation.



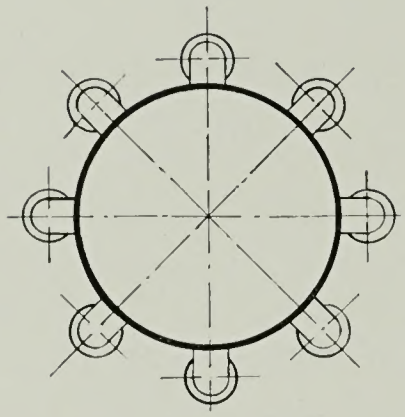
Section showing relative position of lamps, glass panel and auxiliaries. This characterizes all sections of the Equalux Continuous System.

COLONNADE UNITS

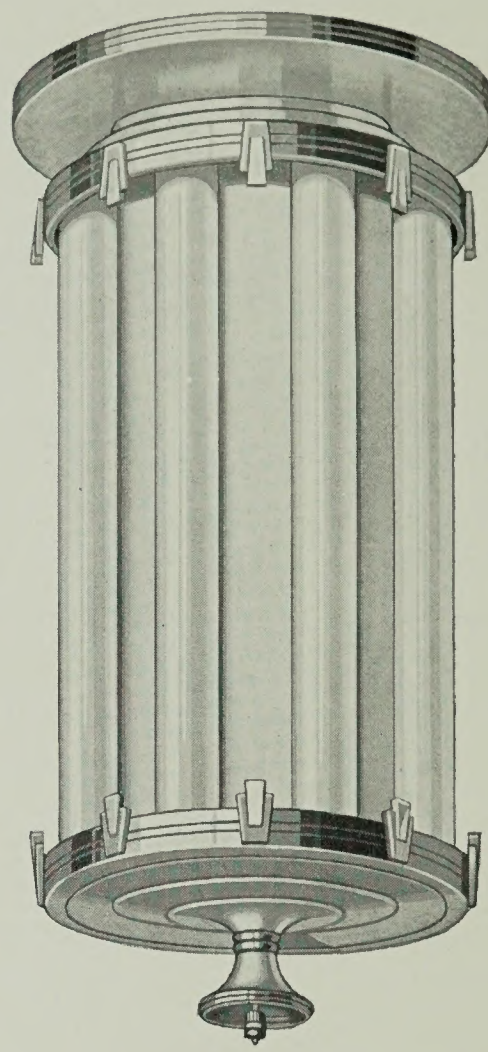


Cat. No.	Lamps	O.A. Dia	Length O.A.
2421	8—48"—320W	14¼"	7'-0"

Finish: Satin Aluminum—Gold Trim.
Reflecting Surface: Matt White.



Section (covering both units on this page) showing lamp positions.



Cat. No.	Lamps	O.A. Dia.	Length O.A.
2423	8—24"—160W	14¼"	36"
2425	8—48"—320W	14¼"	60"

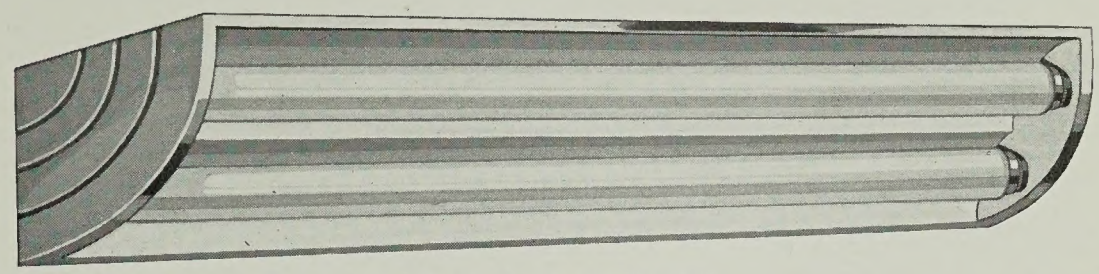
Finish: Satin Aluminum—Gold Trim.
Reflecting Surface: Matt White.

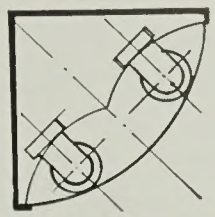
● The Colonnade Units are cylindrical in style and are available either with suspension or for mounting directly on the ceiling. The massive rugged construction of these units includes cast iron webbing at both top and bottom, insuring rigidity.

The decorative design of the unit blends with any interior. The reflecting surfaces of the unit are matt white for maximum diffusion and reflection. This reflector treatment creates the illusion of the lamps blending with the reflecting background as one luminous element. These units are finished in satin aluminum and are highlighted with gold trim.

The distribution of light from these units is vertical in character. This inherent characteristic makes these units decorative architectural elements necessary for high bay lobbies, auditoriums, banking rooms and similar locations.

SPECIFIC UNITS



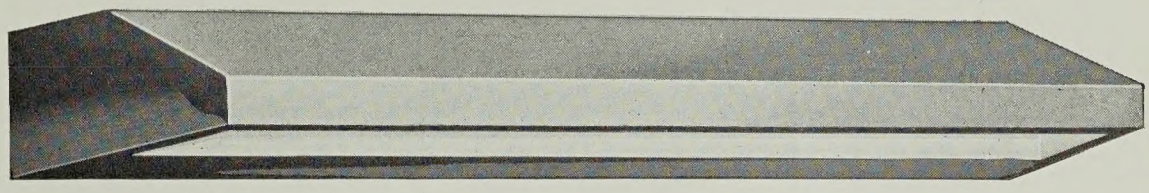


Section of No. 2444

SHOW WINDOWS

Cat. No.	Lamps	Size
2444	2—24"—40W	6"x6"x24½"
2446	2—48"—80W	6"x6"x48½"

Finish: Satin Aluminum. **Reflector:** Matt White.

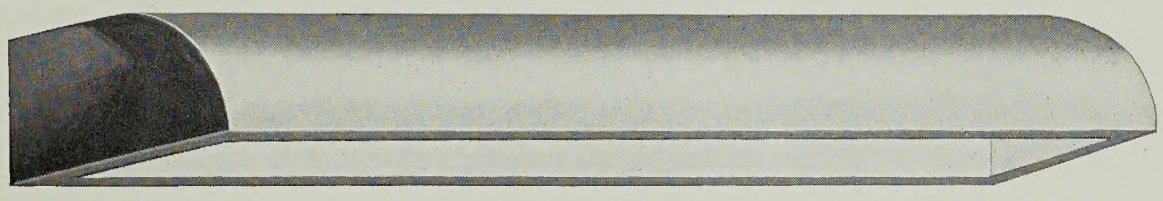


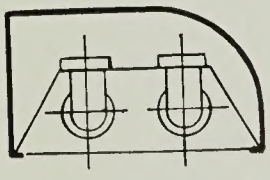
Section of No. 2447

UTILITY BRACKET

Cat. No.	Lamps	Depth	Length	Extends
2448	1—24"—20W	2⅝"	24½"	4½"
2450	1—48"—40W	2⅝"	48½"	4½"

Finish: Satin Aluminum. **Reflecting Surface:** Matt White.



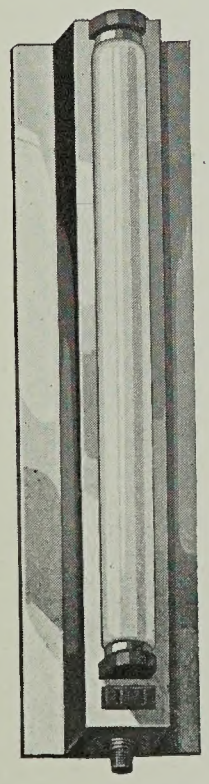


Section of No. 2452

BANK CAGES

Cat. No.	Lamps	Depth	Length	Extends
2453	2—36"—60W	4¾"	36½"	8¼"
2454	2—48"—80W	4¾"	48½"	8¼"

Finish: Satin Aluminum. **Reflector:** Matt White.



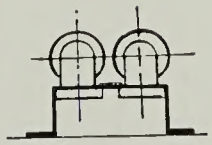
WALL BRACKETS

SECTION

Cat. No.	Lamps	Length	Width
2434C	1—18"—15W	20"	4"
2435C	1—24"—20W	26"	4"

WITH Pin Switch and Convenience Outlet

Finish: Polished Chrome.

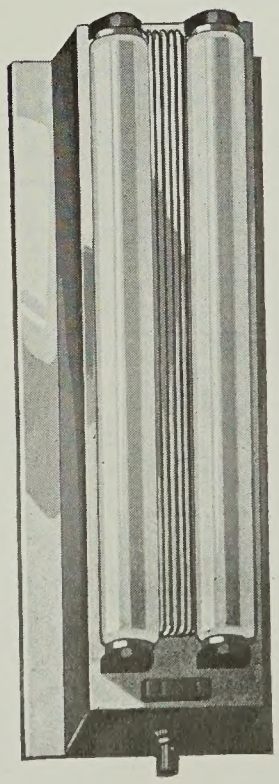


SECTION

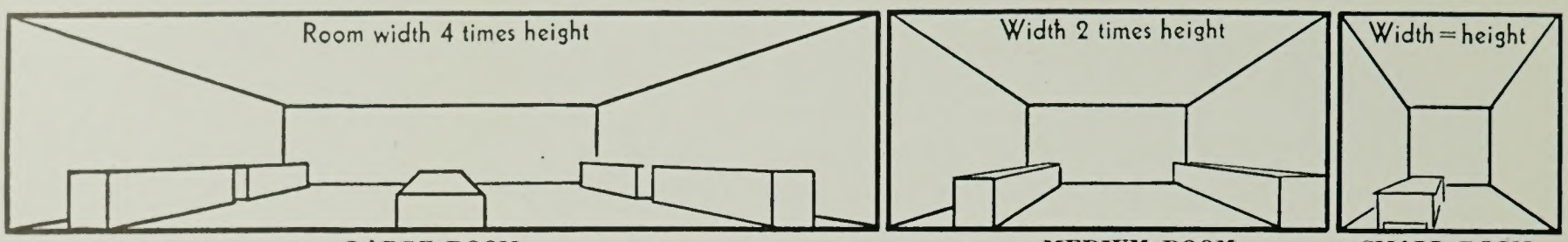
Cat. No.	Lamps	Length	Width
2436C	2—18"—30W	20"	5¼"
2437C	2—24"—40W	26"	6¼"

WITH Pin Switch and Convenience Outlet

Finish: Polished Chrome.



GUIDE FOR ESTIMATING SQUARE FEET PER UNIT TO GIVE 50 FOOTCANDLES IN SERVICE ★



LARGE ROOM | MEDIUM ROOM | SMALL ROOM

Art Metal Standard Listed Lighting Equipment Catalog Number	LARGE ROOM		MEDIUM ROOM		SMALL ROOM	
	Light† Finish	Medium‡ Finish	Light Finish	Medium Finish	Light Finish	Medium Finish
	SQUARE FEET PER UNIT					
Louvrlux						
2410—4 lamp— 40 W	66	55	57	48	45	38
2411—4 lamp—100 W	132	110	114	96	90	76
2413—2 lamp— 40 W	33	28	29	24	23	19
2414—2 lamp—100 W	66	55	57	48	45	38
Equalux						
2415—4 lamp— 40 W	55	44	45	37	35	28
2416—4 lamp—100 W	110	88	90	74	70	56
2418—2 lamp— 40 W	28	22	23	19	18	14
2419—2 lamp—100 W	55	44	45	37	35	28
Panelite						
2512L—2 lamp— 40 W	27	24	23	21	18	16
2512F—2 lamp— 40 W	27	24	23	21	18	16

HOW TO USE THIS TABLE

Having selected the fixture to be used, divide the total square feet of floor space to be lighted by the value from this table corresponding to the size and interior finish of the room. This result will indicate the number of fixtures required. For values other than 50 footcandles multiply result by a factor.

For example: A No. 2410 was selected to light an interior area 30′ x 38′ with a ceiling height of 15 feet. The room conditions are medium with a light finish and each unit would require 57 square feet.

Number of units required for 50 footcandles = $\frac{30 \times 38}{57}$ = 20 units

If 25 footcandles were required instead of 50 footcandles multiply by ½ as:

$\frac{30 \times 38}{57} \times \frac{1}{2}$ = 10 units to produce 25 footcandles

If 100 footcandles were required instead of 50 footcandles multiply by 2 as:

$\frac{30 \times 38}{57} \times 2$ = 40 units to produce 100 footcandles.

SPACING GUIDE FOR THE CONTINUOUS ILLUMINATION SYSTEM TO PRODUCE 50 FOOTCANDLES IN SERVICE ★

Art Metal Standard Listed Continuous System of Illumination	LARGE ROOM		MEDIUM ROOM		SMALL ROOM	
	Light† Finish	Medium‡ Finish	Light Finish	Medium Finish	Light Finish	Medium Finish
	SPACING ● BETWEEN CONTINUOUS ROWS OF UNITS					
Louvrlux Continuous System of Illumination						
2525—2 lamps— 40 W	8	6½	7	5	5½	5
2526—4 lamps— 40 W	16	13	13½	10½	11	9½
2527—2 lamps—100 W	12½	10½	11	9	8½	7
2528—4 lamps—100 W	25	21	21½	18	17	14
Equalux Continuous System of Illumination						
2534—2 lamps— 40 W	6½	5½	5½	4½	4	3½
2535—4 lamps— 40 W	13	10½	11	9	8	7
2536—2 lamps—100 W	10½	8½	8½	7	6½	5½
2537—4 lamps—100 W	21	16½	17	14	13	10½
Panelite Continuous System of Illumination						
2512—2 lamps— 40 W	6½	6	5½	5	4	4

● This spacing produces an average illumination of approximately 50 footcandles but does not assure even coverage. Check spacing by this table against distribution curve of the equipment to assure adequate coverage.

★Using 3500° white fluorescent lamps. If daylight lamps are used, about 20% more units are needed. The average illumination in service will be around 50 footcandles. Due to depreciation of lamps and units, the initial footcandle levels will be appreciably higher.

†Light Finish—ceiling 75% and walls 50%. ‡Medium Finish—ceiling 50% and walls 30%.

TABLE OF COEFFICIENTS OF UTILIZATION (Of the Art Metal Fluorescent Units)

Art Metal Standard Listed Lighting Equipment Catalog Number	Ceiling	75%			50%			30%		Maintenance Factors
	Walls	50%	30%	10%	50%	30%	10%	30%	10%	
	Room Index	COEFFICIENTS OF UTILIZATION								
Louvrlux ★	J	.26	.23	.21	.24	.22	.20	.20	.18	
2410	I	.32	.29	.28	.29	.27	.25	.25	.21	
2411	H	.36	.33	.31	.32	.30	.28	.28	.27	
2413	G	.39	.36	.34	.35	.33	.31	.30	.29	
2414	F	.42	.39	.36	.37	.35	.33	.32	.31	.85 Clean
	E	.45	.42	.40	.40	.38	.36	.34	.33	.75 Av.
	D	.48	.45	.43	.43	.40	.39	.37	.36	
	C	.50	.47	.44	.44	.42	.40	.38	.37	
	B	.52	.49	.47	.46	.44	.43	.39	.38	
	A	.54	.51	.50	.47	.45	.44	.41	.39	
Equalux ★	J	.23	.20	.18	.21	.18	.16	.16	.15	
2415	I	.29	.26	.24	.26	.23	.21	.21	.19	
2416	H	.32	.29	.27	.28	.26	.24	.23	.22	
2418	G	.36	.32	.30	.31	.29	.27	.25	.24	
2419	F	.38	.35	.32	.33	.30	.29	.27	.26	.75 Clean
	E	.41	.39	.36	.36	.34	.32	.30	.28	.65 Av.
	D	.45	.42	.38	.39	.36	.35	.32	.31	
	C	.47	.44	.41	.40	.38	.36	.33	.32	
	B	.50	.47	.45	.42	.40	.39	.35	.34	
	A	.52	.49	.47	.44	.42	.40	.36	.35	
Panelite	J	.22	.19	.17	.21	.18	.17	.18	.17	
2512L	I	.26	.21	.22	.25	.23	.22	.23	.21	
2512F	H	.29	.26	.25	.28	.26	.24	.25	.24	
	G	.31	.29	.27	.30	.28	.26	.27	.26	
	F	.34	.31	.29	.32	.30	.28	.29	.28	.85 Clean
	E	.36	.34	.32	.35	.33	.31	.32	.30	.75 Av.
	D	.39	.36	.34	.37	.35	.33	.34	.33	
	C	.41	.38	.35	.39	.36	.34	.35	.34	
	B	.43	.40	.38	.40	.38	.36	.37	.36	
	A	.44	.41	.39	.41	.39	.37	.38	.37	

★For the coefficients of Utilization for the Louvrlux Continuous System of Illumination or the Equalux Continuous System of Illumination, refer to the corresponding Louvrlux or Equalux unit.

NOTE: For a detailed explanation of the Lumen Method for computing interior illumination, please refer to our Catalog No. C-142, pages 4 to 11. Included in these pages are the necessary equations for the computations, room indices and all other pertinent information to facilitate these calculations.

★

★ALL FLEUR-O-LIER equipment carries this tag.

FLEUR·O·LIER *Manufacturers*

ALL EQUIPMENT LISTED IN THIS CATALOG IS APPROVED BY THE UNDERWRITERS' LABORATORIES, INC., AND IS LABELED AS EVIDENCE THEREOF.

Printed in U. S. A.

Schedule A Discounts

LIST PRICE SCHEDULE
GERMICIDAL LAMP EQUIPMENT

CATALOG NO. GL-841

EFFECTIVE SEPT. 8th, 1941

This PRICE LIST covers our line of GERMICIDAL LAMP EQUIPMENT.

Prices, Designs and Constructions are subject to change without any notice whatsoever, therefore under no conditions are we responsible for any work in connection with equipment as furnished. All prices are subject to any taxes or charges that may be imposed by Federal or State authorities.

All Agreements are made and all orders accepted contingent upon strikes, fires, accidents, unusual market conditions or causes beyond our control.

Orders on which specifications are not definitely clear cannot be filled without considerable loss of time consumed in writing for needed information. **Give full instructions when ordering to facilitate prompt service.**

State clearly how the goods ordered are to be shipped, whether by freight, express or otherwise. If there is any preference for a certain route, it should be mentioned on the order.

Great care is used in filling orders promptly, packing goods properly and obtaining receipts from carriers for delivery in good condition. We cannot, therefore, be responsible for goods damaged or lost in transportation. All possible precautions, however, will be used to prevent injury or delay and if requested, shipment will be traced.

Returned Goods will be accepted only after authorization is given, and return goods tags must be attached to all cartons.

Catalog No.	List Price
2540	32.10
2541	36.45
2542	25.65
2543	29.55
2544	25.80
2545	30.30
2546	19.80
2547	22.20

All Germicidal Lamp Equipment comes Equipped with High Power Factor Ballasts.

Lamps are not included.

Price for Equipment Furnished with Cord and Plug on Request.

All orders are taken subject to the approval of the Company at its Home Office in Cleveland, Ohio, and are not binding upon the Company until accepted by the Company at its Home Office. All orders are taken for goods F.O.B. Cleveland, Ohio.

THE ART METAL COMPANY
CLEVELAND, OHIO

Printed in U. S. A.

GERMICIDAL LAMP EQUIPMENT

FOR THE REDUCTION OF AIR-BORNE BACTERIA

THE ART METAL COMPANY
CLEVELAND, OHIO

CATALOG No. GL-841

GERMICIDAL LAMP EQUIPMENT

FOR THE REDUCTION OF AIR-BORNE BACTERIA

• Wherever people congregate infection may be carried by air-borne bacteria—in offices —schools—hospitals—hotels—stores and all public buildings. The use of ultraviolet energy emitted by Germicidal lamps will not completely eliminate the possibility of contracting disease communicable by air-borne bacteria, but it is a proven fact that possible infection can be materially reduced by placing units at points of maximum air circulation — over doors — windows — sidewalls—and on high cases—cabinets or ledges. Because of their small size and low visible light output, Germicidal units blend unobtrusively with ordinary room furnishings.

WHAT ULTRAVIOLET DOES

In sunlight there are three general classes of radiant energy—INFRARED, which is invisible but produces heat, VISIBLE radiation or light which enables us to see, and ULTRAVIOLET which is invisible but gives us sunburn and tan in the summertime. The only difference in these types of energy is the length of their waves. The infrared are longest, the visible are shorter, and the ultraviolet are still shorter.

The ultraviolet energy that we receive from the sun is known as "near" ultraviolet—it is near to visible light. Shorter waves, known as "far" ultraviolet, are probably cut off by the atmosphere surrounding the earth. Careful research has proved beyond question that these shorter wavelengths of ultraviolet will kill air-borne bacteria, provided that the bacteria are exposed to energy of sufficient intensity for a long enough period of time.

LAMP CHARACTERISTICS

Germicidal Lamps Start and Operate On 110-125 Volt—60 Cycle AC Current

The efficiency of Germicidal lamps is effected by humidity and temperature. At normal room temperature and humidity, sanitary ventilation equivalent to 100 air changes per hour is obtainable with an electrical imput to Germicidal lamps of only 1 to 2 watts per 100 cubic feet of room volume. This range of energy input is dependent upon the ceiling height above the mounting position of the equipment.

Art Metal has developed equipment for two efficient sources of this lethal or Germicidal energy for both the 15 and 30 watt Germicidal lamps. The 15 watt, T-8 lamp is 18 inches overall while the 30 watt, T-8 lamp is 36 inches overall. With a low wattage consumption, these lamps produce a quantity of potent ultraviolet energy which kills bacteria in the shortest time interval. Installed properly with a good reflector and cleaned regularly, Germicidal lamps are an important aid in the fight against communicable disease.

ART METAL GERMICIDAL APPLICATIONS

This equipment is offered in four models for specific uses:—

1. (No. 2540-1) INDIRECT for use on high cases, cabinets or between baby cubicles.
   This model DIRECT can be used over Surgical dressing tables, etc.
   Symmetric distribution.
2. (No. 2542-3) UTILITY INDIRECT for use on side walls.
   Asymmetric distribution.
3. (No. 2544-5) CURTAIN-DIRECT-INDIRECT for use over doors, windows and ward partitions.
   Asymmetric distribution.
4. (No. 2546-7) DIRECT TYPE for use in air ducts—concealed from view.

INSTALLATION

Germicidal lamps should be installed under competent engineering supervision. Complete information about these lamps and their applications can be obtained from our Engineering Department.

MAINTENANCE

It is essential to keep the lamps and reflectors clean. Very slight films of dust or dirt, and particularly grease, materially reduce the germicidal output of the lamp and reflector. It is recommended that a regular cleaning schedule be set up in connection with any installation of the lamps.

CAUTION

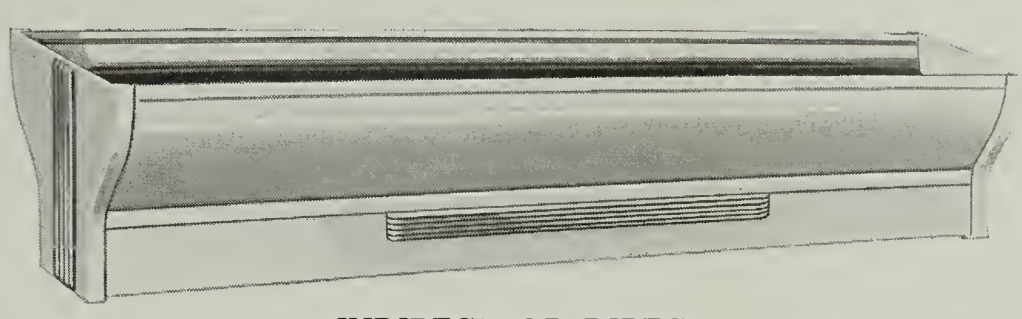
The ultraviolet energy emitted by the Germicidal lamp can produce sunburn on bare skin closely exposed to the lamp. Direct viewing of the lamps for a considerable period is harmful to the eyes. Therefore the lamps should not be installed where they will shine directly into anyone's eyes, nor should bare skin be exposed for an appreciable length of time within the direct radiation of the lamps at close range.

The first three types shown opposite should not be mounted less than 6'-0" from the floor. The last type (No. 2546-7) should never be used except in locations where positive shielding from the eyes is certain.

GERMICIDAL LAMP EQUIPMENT

FOR THE REDUCTION OF AIR-BORNE BACTERIA

Section of No. 2540



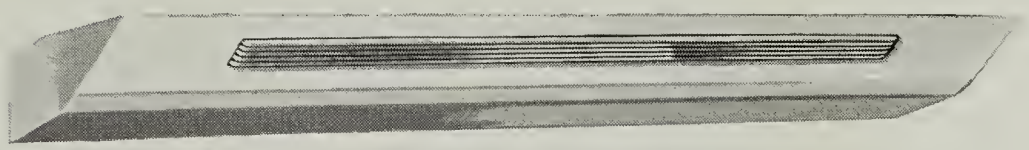
INDIRECT OR DIRECT

For use on cabinets and cases.

Cat. No.	Watts	Size	Ht. O.A.
2540	15	5½" x 18½"	5¾"
2541	30	5½" x 36½"	5¾"

Finish: Satin Aluminum—Chrome Trim
Reflector: (symmetric) Polished Chrome

Section of No. 2542



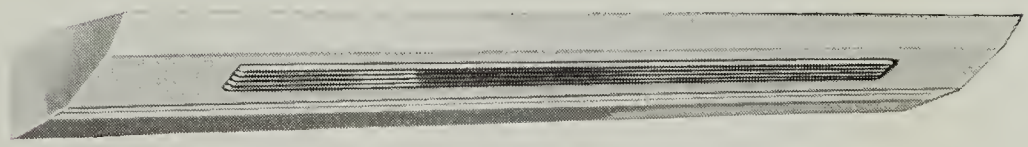
UTILITY INDIRECT

For use on side walls.

Cat. No.	Watts	Size
2542	15	5½" x 18½"
2543	30	5½" x 36½"

Finish: Satin Aluminum—Chrome Trim
Reflector: (asymmetric) Polished Chrome
Note: Keyhole slot supports

Section of No. 2544



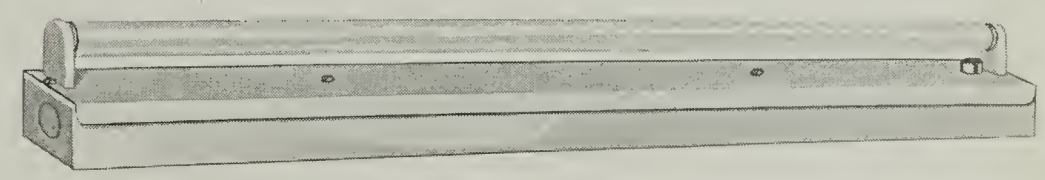
CURTAIN—DIRECT—INDIRECT

For use over doors and windows.

Cat. No.	Watts	Size
2544	15	5½" x 18½"
2545	30	5½" x 36½"

Finish: Satin Aluminum—Chrome Trim
Reflector: (asymmetric) Polished Chrome
Note: Keyhole slot supports

Section of No. 2546



DIRECT TYPE

For use in air ducts—concealed from view.

Cat. No.	Watts	Size
2546	15	2½" x 19"
2547	30	2½" x 37"

Finish: Aluminum
Knock Outs furnished both ends

NOTE—ABOVE UNITS CAN BE FURNISHED WITH 8 FT. CORD AND PLUG ON REQUEST.

Printed in U. S. A.

Schedule A Discounts

LIST PRICE SCHEDULE
COMMERCIAL LIGHTING EQUIPMENT

CATALOG NUMBERS C143 and C142

ANY CATALOG NUMBER IN ABOVE CATALOGS NOT IN THIS PRICE LIST HAS BEEN DISCONTINUED.

EFFECTIVE MARCH 23rd, 1942 and supersedes all previous Price Lists.

This PRICE LIST covers our line of COMMERCIAL LIGHTING EQUIPMENT and SUPERSEDES ALL PREVIOUS ISSUES

Prices, Designs and Constructions are subject to change without any notice whatsoever, therefore under no conditions are we responsible for any work in connection with equipment as furnished. All prices are subject to any taxes or charges that may be imposed by Federal or State authorities.

All Agreements are made and all orders accepted contingent upon strikes, fires, accidents, unusual market conditions or causes beyond our control.

Orders on which specifications are not definitely clear cannot be filled without considerable loss of time consumed in writing for needed information. Give full instructions when ordering to facilitate prompt service.

State clearly how the goods ordered are to be shipped, whether by freight, express or otherwise. If there is any preference for a certain route, it should be mentioned on the order.

Great care is used in filling orders promptly, packing goods properly and obtaining receipts from carriers for delivery in good condition. We cannot, therefore, be responsible for goods damaged or lost in transportation. All possible precautions, however, will be used to prevent injury or delay and if requested, shipment will be traced.

Standard Packages: All fixtures are packed one finish to a standard package. Broken packages 10% additional.

Finishes: Standard and Optional Finishes are specified for each Catalog Number. For finishes other than standard or optional as specified, and listed in code for finishes, add 20% to list price of fixture. Prices for finishes other than listed on application only.

Returned Goods will be accepted only after authorization is given, and return goods tags must be attached to all cartons.

Fluorescent Units: All units are tested before leaving factory—The Art Metal Company assumes no responsibility for the performance or life of any component equipment not of our manufacture.
The manufacturers of ballasts will replace defective equipment but will accept no labor or transportation charges.

Code for Finishes

Silvertint	CHEZI
Goldtint	CIBAH
Bronzetint	CIBEL
Durocreme and Silver	CIBIW
Ivory and Gold	CIBOW
Empire White and Silver	COFOR
Polished Chrome	POLCRO
Satin Chrome	SATCRO

Delivery Schedule for Finishes
Based from Date Order is Received:
Equipment with Standard Finish: Stock.
Equipment with Optional Finish: 4 Days Minimum.
Equipment with Finish other than Standard or Optional but listed in Code for Finishes: 5 Days Minimum.
Equipment with Finish not listed in Code for Finishes: 7 Days Minimum.

Chrome Fronts for Recessed Units Only:

8″ Lens Single Light Sq. or Rd.	Add list $ 4.50
12″ Lens Single Light Sq. or Rd.	Add list $ 5.85
12″ Lens Two Light Square	Add list $10.50
12″ Lens Four Light Square	Add list $21.00

Extra Lengthening for Chain and Stem Pendants

Chain, Standard Finish, including wire	list per ft. or fraction $.45
Stem, Standard Finish, including wire	list per ft. or fraction $1.20
Chain, Polished Chromium Finish, including wire	list per ft. or fraction $.75
Stem, Polished Chromium Finish, including wire	list per ft. or fraction $1.35
Twin Stem Pendant	list per ft. or fraction $2.70

All Wires: Approved by National Board of Underwriters, polarized and terminals soldered.
Mogul base socket No. 14 Wire.
Medium base No. 16 Wire.

Canopy Switch Installed, $1.95 list.
Two Circuits: One additional socket, $3.00 list.

Fixtures Wired for Dual Filament Bulbs:
Complete with switch, $3.00 additional list.
Without switch, $1.20 additional list.

All orders are taken subject to the approval of the Company at its Home Office in Cleveland, Ohio, and are not binding upon the Company until accepted by the Company at its Home Office. All orders are taken for goods F.O.B. Cleveland, Ohio.

THE ART METAL COMPANY
CLEVELAND, OHIO

Printed in U. S. A.

Schedule A Discounts

Catalog Number		Page	Code	Std. Pkg	List Price
47	Made of Steel	54	EAEOW	24	2.25
47	Pol. Chrome—Made of Steel	54		24	3.15
48	Made of Steel	54	EAFUT	12	2.55
48	Pol. Chrome—Made of Steel	54		12	3.75
100		49	EAFUS	12	3.54
100	Pol. Chrome	49		12	4.38
115-5		47	ELAB	2	9.60
115-6		47	ELBE	2	11.70
117-5		47	ELCO	2	5.40
117-6		47	ELDA	2	6.30
201		49	EANIT	4	11.10
201	Pol. Chrome	49		4	12.90
206		49	EAWOX	6	5.25
209		47	EBAEF	4	7.80
209	Pol. Chrome	47		4	8.70
210		47	EBBE	4	7.80
210	Pol. Chrome	47		4	8.70
211		49	EBCIX	24	.75
211	Pol. Chrome	49		24	1.20
216	Made of Steel	48	EBHOT	1	17.10
216	Pol. Chrome—Made of Steel	48		1	19.80
217	Made of Steel	48	EBISU	1	13.50
217	Pol. Chrome—Made of Steel	48		1	15.60
218	Made of Steel	48	EBJEL	1	20.16
218	Pol. Chrome—Made of Steel	48		1	24.60
450		24	LABA	1	36.24
450	Wire Guarded	24		1	41.73
450C		24	LABC	1	42.84
450C	Wire Guarded	24		1	48.36
457		26	LABK	1	31.95
457	Wire Guarded	26		1	37.32
457C		26	LABL	1	38.43
457C	Wire Guarded	26		1	43.95
457E		31	LABM	1	34.02
467		22	LABP	1	37.80
467C		22	LABQ	1	44.43
474		25	LABV	1	26.79
474	Wire Guarded	25		1	31.02
474C		25	LABW	1	31.02
474C	Wire Guarded	25		1	35.28
476		23	LABY	1	34.32
476C		23	LABZ	1	38.58
478		27	LACD	1	23.46
478	Wire Guarded	27		1	27.72
478C		27	LACE	1	27.72
478C	Wire Guarded	27		1	31.98
478E		31	LACF	1	23.04
480		28-41	LACG	1	28.20
480C		28-41	LACH	1	31.02
480L		30	LACI	1	23.94
481		28	LACJ	1	22.05
481C		28	LACK	1	24.90
481L		30	LACL	1	20.16
511		33	JAIQ	12	1.80
550		24	LACM	1	36.21
550	Wire Guarded	24		1	41.22
550C		24	LACN	1	42.84
550C	Wire Guarded	24		1	48.36
557		26	LACV	1	31.83
557	Wire Guarded	26		1	37.32
557C		26	LACW	1	38.43
557C	Wire Guarded	26		1	44.94
567		22	LACY	1	37.80
567C		22	LACZ	1	44.43
574		25	LADF	1	26.76
574	Wire Guarded	25		1	31.02
574C		25	LADG	1	31.02
574C	Wire Guarded	25		1	35.28
576		23	LADI	1	34.32
576C		23	LADJ	1	38.54
578		27	LADM	1	23.46
578	Wire Guarded	27		1	27.72
578C		27	LADN	1	27.72
578C	Wire Guarded	27		1	31.98
657		31	LADP	1	32.79
667		31	LADQ	1	32.61
676		31	LADR	1	30.93
678		31	LADS	1	21.78
702-5		47	ECVIM	2	9.00
702-6		47	ECZAP	2	10.80
722-5		47	EDTOT	2	7.50
722-6		47	EDXIZ	2	8.70
1140		53	EJSTA	32	2.28
1140	Pol. Chrome	53		32	3.33
1143S		53	EKBIM	10	4.08
1143S	Pol. Chrome	53		10	5.58
1160		53	EKCOT	32	2.28
1160	Pol. Chrome	53		32	3.33
1160M		53	EKDIL	32	3.18
1160M	Pol. Chrome	53		32	4.23
1163S		53	EKIMP	10	4.08
1163S	Pol. Chrome	53		10	5.58
1163SM		53	EKLAS	10	4.98
1163SM	Pol. Chrome	53		10	6.48
1240		53	EKOME	32	1.56
1240	Pol. Chrome	53		32	2.31
1260		53	EKRIP	32	1.56
1260	Pol. Chrome	53		32	2.31
1260M		53	EKULA	16	2.91
1260M	Pol. Chrome	53		16	3.66
1502		32	ELFOR	1	14.25
1506		32	ELKAR	1	20.25
1640		52	FIAB	32	2.70
1640	Pol. Chrome	52		32	3.90
1641		52	FIBY	32	2.70
1641	Pol. Chrome	52		32	3.90
1642		52	FICO	16	3.75
1642	Pol. Chrome	52		16	4.80
1652		52	GIAB	10	4.05
1652	Pol. Chrome	52		10	5.67
1653		52	GIAD	10	4.05
1653	Pol. Chrome	52		10	5.67
1654		52	GIAE	10	5.10
1654	Pol. Chrome	52		10	6.57
1655		52	FIGU	32	1.86
1655	Pol. Chrome	52		32	2.91
1656		52	FIHR	32	1.86
1656	Pol. Chrome	52		32	2.91
1657		52	FIJA	16	3.06
1657	Pol. Chrome	52		16	4.26
1715		49	CURAB	1	7.50
1732		37	ELUX	1	11.55
1732S		37	ELWO	1	13.35
1733		44	EMAB	1	12.75
1733S		44	EMCA	1	14.40
1738		48	EMER	2	4.44
1738	Pol. Chrome	48	EMRA	2	5.34
1739		48	EMFAX	2	6.45
1739	Pol. Chrome	48	EMFTY	2	7.35
1758S		43	EMRAY	1	18.00
1762		44	ETAX	1	10.32
1762S		44	EVON	1	12.18
1781S		36	GIAH	1	15.75
1782S		36	GIAK	1	19.50
1788		45	GIAT	1	11.10
1788S		45	GIAU	1	12.60
1802S		44	GOAC	1	48.00
1803S		43	GOAF	1	57.00
1808		48	GOAR	2	9.60
1808	Pol. Chrome	48	GOBC	2	10.80
1809		48	GOAS	2	12.42
1809	Pol. Chrome	48	GOXX	2	13.77
1815S		43	GUAD	1	15.75
1829		34	HAFA	1	5.40
1860		34	HABM	1	16.50
1868	Finish—Outdoor Black Only	50	HABQ	1	103.29
1869	Finish—Outdoor Black Only	50	HABR	1	115.44
1870	Finish—Outdoor Black Only	51	HABS	1	140.40
1871	Finish—Outdoor Black Only	51	HABT	1	162.00
1872	Finish—Outdoor Black Only	50	HABU	1	83.70
1873	Finish—Outdoor Black Only	50	HABV	1	94.50
1874	Finish—Outdoor Black Only	51	HABW	1	86.40
1875	Finish—Outdoor Black Only	51	HABX	1	97.20
1925		32	HAFG	2	9.99
1925L		32	HAFI	2	11.25
1930		40	HAE	1	21.00
1943		35-42	HAER	1	20.85
1944		35	HAES	1	19.50
1956		45	HAFM	1	13.50
2109		54	JABA	32	.75
2109	Pol. Chrome	54		32	1.20
2110		54	JABC	32	.57
2110	Pol. Chrome	54		32	.87
2141		54	FOIT	32	1.80
2141	Pol. Chrome	54		32	2.85
2146S		54	FIRZ	10	3.60

Schedule A Discounts

Catalog Number		Page	Code	Std. Pkg.	List Price
2146S	Pol. Chrome	54		10	5.10
2161		54	FISK	32	1.95
2161	Pol. Chrome	54		32	3.00
2161M		54	FITY	32	2.85
2161M	Pol. Chrome	54		32	4.20
2166S		54	FIWA	10	3.75
2166S	Pol. Chrome	54		10	5.25
2166SM		54	FIXB	10	4.65
2166SM	Pol. Chrome	54		10	6.15
2241		54	FIZY	32	1.20
2241	Pol. Chrome	54		32	1.95
2261		54	FLAB	32	1.35
2261	Pol. Chrome	54		32	2.10
2261M		54	FLBO	16	2.70
2261M	Pol. Chrome	54		16	3.45
2300		52	HADP	10	4.95
2301		52	HADQ	10	5.85
2317		52	HAEH	10	4.05
2318		52	HAEI	10	4.95
2409		34	JACE	1	12.30
2410		12	JACF	1	87.00
2411		12	JACG	1	171.00
2413		12	JACI	1	52.50
2414		12	JACJ	1	114.00
2415		14	JACK	1	96.00
2416		14	JACL	1	186.00
2418		14	JACN	1	64.80
2419		14	JACO	1	120.00
2434C		16	JAFH	2	29.40
2434C	LPF	16		2	15.00
2435C		16	JAFI	2	30.00
2435C	LPF	16		2	18.00
2455		17	JADZ	1	42.00
2456		17	JAEA	1	36.75
2485		41	JAFF	1	66.00
2486		41	JAFG	1	70.50
2521		13	JAGU	1	57.00
2522		13	JAGV	1	91.50
2523		13	JAGW	1	121.50
2524		13	JAGX	1	183.00
2525		13	JAGY	1	52.50
2526		13	JAGZ	1	87.00
2527		13	JAHA	1	114.00
2528		13	JAHB	1	171.00
2530		15	JAHD	1	69.30
2531		15	JAHE	1	100.50
2532		15	JAHF	1	127.50
2533		15	JAHG	1	198.00
2534		15	JAHI	1	64.80
2535		15	JAHJ	1	96.00
2536		15	JAHK	1	120.00
2537		15	JAHL	1	186.00
2540		19	JAHO	2	32.10
2541		19	JAHP	2	36.45
2542		19	JHHQ	2	25.65
2543		19	JAHR	2	29.55
2544		19	JAHS	2	25.80
2545		19	JAHT	2	30.30
2546		19	JAHU	2	19.80
2547		19	JAHV	2	22.20
2548		32	JAHW	2	12.39
2549		33	JAHX	2	36.00
2550		33	JAHY	2	41.25
2551		33	JAHZ	2	47.25
2552		33	JAIA	2	13.65
2553		33	JAIB	2	20.55
2554		33	JAIC	2	24.45
2555		33	JAID	2	31.95
2556		33	JAIE	2	37.20
2557		33	JAIF	2	44.25
2558		33	JAIG	2	9.60
2559		33	JAIH	2	16.50
2560		33	JAIJ	2	21.45
2562		34	JAIL	2	12.30
2563		46	JAIM	1	21.00
5042	Made of Steel	54	FLJO	16	2.25
5042	Pol. Chrome—Made of Steel	54		16	3.45
5062	Made of Steel	54	FLKR	16	2.40
5062	Pol. Chrome—Made of Steel	54		16	3.60
5062M	Made of Steel	54	FLMX	16	3.90
5062M	Pol. Chrome—Made of Steel	54		16	5.10

NOTICE

Gold tint is no longer an available finish on commercial units.

Pewter finish is no longer optional on the Sentinel, Economy and Master Line Hanger Equipment.

Economy Line—Sentinel Line and Master Line Hangers are obtainable in 22 Gauge Brass — Price on application.